JPRS 78704

7 August 1981

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 175

FBIS FOREIGN BROADCAST INFORMATION SERVICE

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CONTENTS

WEST EUROPE

FINN FIRM CANNOT SELL EXCHANGE TO USSR; HAS U.S. PARTS

Helsinki UUSI SUOMI in Finnish 10 Jul 81 p 14

[Article: "New Obstacles to Eastern Trade; LME Did Not Get Export License"]

[Text] After a long siege of negotiations, L.M. Ericsson Oy (LME) has been refused an export license for the USSR.

The Licensing Office has not granted LME an export license for the telephone exchange agreement made with the USSR last January.

According to Licensing Office department head Eero Aho, in the reasons given for the rejection it is maintained that the design and equipment manufacture divisions do not measure up to the demanding standards of the bilateral agreement.

"The agreement cannot be carried out in this way," Aho said.

Last January LME entered into a 35-million-mark agreement to supply the Soviet city of Zaporozh'ye with a digital exchange. The agreement was regarded as the big breakthrough into the Soviet market.

The LME contract was supposed to come under the clearing arrangement which is included in the Finnish-Soviet trade proceedings. An export license is required for such agreements.

Problems with Eastern Market

The LME has had licensing problems with its eastern exports.

LME uses American components for its AXE [expansion unknown] system, components on which the American Government has placed a ban on exports to the USSR.

LME had expected the change of American presidents to ease export bans but so far President Reagan has not relaxed these restrictions.

The export ban has posed a problem for LME. As far as the American components are concerned, a competitor capable of competing pricewise cannot be found, so LME has to use them.

The Zaporozh'ye deal was regarded as LME's big breakthrough into the Soviet market. Now the Licensing Office's negative response is piling up new obstacles to LME's eastern exports.

11,466
CSO: 5500/2265

INDIA, USSR TEST NEW COMMUNICATIONS LINK

LD271006 Moscow TASS International Service in Russian 2315 GMT 26 Jul 81

[Text] Delhi, 26 Jul (TASS)--Work on the construction of direct multichannel troposphere communications between India and the Soviet Union has entered its final stage. UNI agency reports that installation of the basic equipment has been completed and testing of the communications systems has begun at the Indian receiving and transmitting station of (?Chari-i-Sherf), constructed in the Srinagar area (Ammu and Kashmir State) with the assistance of Soviet specialists.

Telegraph, telephone and telex links now operate between India and the Soviet Union. Recently Delhi and Moscow were also linked by a direct satellite communications line. However, the constantly growing flow of information has called for the creation of a new simple and reliable means of communication between the two countries.

In 1977 an agreement on the creation of a troposphere link was signed between the two countries. It provides for the installation of Soviet radio equipment at ground stations in the two countries, the training of Indian specialists with the help of Soviet engineers and technicians. The antennas of the future stations were made at enterprises of the state Indian corporation "Electronics Corporation of India."

The peaks of the Hindu-Kush mountain system will be used as natural relay points for the new line. The 12-channel communications station in Kashmir will begin to send radio waves which, reflected from the troposphere and mountain peaks, will be received by stations in Dushanbe and Tashkent and be relayed on coaxial cables and microwave radiorelay lines. The troposphere line will ensure reliable communications between India and not only the USSR but also other European countries. In the future it is intended to increase the number of channels from 12 to 24 and to build a number of new ground stations.

The opening of the troposphere communications line during the forthcoming month of Indian-Soviet friendship, devoted to the 10th anniversary of the treaty of peace, friendship and cooperation between India and the Soviet Union, is a new indication of the mutually advantageous collaboration between the two countries.

CSO: 5500/2273

BRIEFS

'UNI'S' DUBAYY SATELLITE LINK--The United News of India [UNI] on 20 July commissioned the Dubayy-Delhi satellite link. With this it has become the first Indian news agency to employ modern means to provide coverage of events in the Gulf and neighboring states. The agency has already set up a Delhi-Dubayy satellite channel to serve newspapers in the United Arab Emirates. [Text] [BK211445 Delhi Domestic Service in English 1530 GMT 20 Jul 81 BK]

CSO: 5500/2273

BRIEFS

SATELLITE DIFFICULTIES--New Delhi, 22 Jul (TANJUG)--The Indian communication satellite "The Apple," which became, six days ago, the earth's permanent companion at an altitude of 36 thousand km, above Sumatra, has successfully passed the test so far and goes into experimental stage today. All vital instruments on India's first communication satellite, except the still stuck solar panel, are functioning well. It took 28 days to bring this satellite, launched already last month from French Guyana, to the envisaged orbit round the earth. However, after a multitude of highly complicated manoeuvres which called for a complete revision of the original programme, this exclusively Indian-made satellite was finally placed into the envisaged orbit. After this extraordinary feat of Indian scientists, which brought India into the exclusive "space club," it has been confirmed here that a national "Insat" satellite is expected to be launched next year. The satellite is to enable the transmitting of TV programmes to the whole country. Indian Minister of Information and Broadcasting V. P. Sathe has lately pointed out the special importance of communication satellites for ensuring the reception of adequate educational and other programmes throughout India, especially in its outlying areas. [Text] [LD221412 Belgrade TANJUG in English 1129 GMT 22 Jul 81]

CSO: 5500/2273

NEW GENERATION OF PALAPA SATELLITES PLANNED

BK171027 Jakarta ANTARA in English 0840 GMT 17 Jul 81

[Text] Jakarta, 17 Jul (ANTARA)--Indonesia in the middle of 1982 will launch a second generation Palapa satellites (B1 and B2) to replace its first generation Palapa satellites (A1 and A2) which will remain in service until 1982 and 1983.

This was disclosed by the president director of the state-owned telecommunication corporation (Perumtal), Dr Willy Munandir, in the TVRI program "Masalah Kita" (Our Problem), here Wednesday evening.

In giving further details Willy Munandir said that the A1 Palapa satellite was launched in 1975 and the A2 in 1976 from NASA's launching pad at Cape Kennedy, using Delta, Atlas Centaur and Titan rocket launchers.

The first generation Palapa satellites used 12 responders to function as a domestic satellite communication system, Willy Munandir added.

For the launching of the B1 and B2 Palapa satellites will be used NASA's space shuttle craft. The satellite will have a capacity of 24 responders, he said.

He further disclosed that the B1 and B2 Palapa satellites are at present still under construction.

The Palapa satellites in carrying out their function as a domestic satellite communication system, covering the whole territory of Indonesia and the area of Southeast Asia, would be assisted by 50 earth stations spread throughout the whole territory of Indonesia, Munandir said.

Willy Munandir further said that in the current third five-year plan 75 more small earth stations would be built which would be spread throughout the country's 27 provinces. From these 75 stations 71 would be put into operation while the ramaining four would be kept in reserve.

Through the utilization of the domestic satellite communication system TVRI broadcasts could reach all the provincial capitals and other places, so that people in all the provinces could enjoy the TV broadcasts simultaneously, he said.

Through the same system, the people living in the remotest islands could then communicate with one another by telephone, the fastest means of communications available, he concluded.

BRIEFS

PHONE COMPANY IMPROVEMENTS--It has been announced that the Barbados Telephone Company Limited has concluded a US$5.95 million financing agreement with the Export Development Corporation (EDC) of Canada to support a US$7 million purchase from Northern Telecom International Limited of Toronto, Ontario. The project involves the engineering, manufacturing and installation of various digital and electromechanical switching equipment and associated services for the second phase of the expansion and modernisation of the Barbados Telephone Company Limited system. Northern Telecom is a major producer of telecommunications equipment selling to the international market. The Export Development Corporation (EDC) is a Canadian Crown Corporation that arranges credit for buyers of Canadian goods and services. [Text] [Bridgetown ADVOCATE-NEWS in English 26 Jun 81 p 1]

CSO: 5500/7541

TELEBRAS TO ALLOCATE 7 BILLION CRUZEIROS MORE FOR INVESTMENT

Rio de Janeiro GAZETA MERCANTIL in Portuguese 1 Jul 81 p 8

[Report from Sao Paulo by Marcia Raposo]

[Text] The Brazilian Telecommunications Corporation (TELBRAS) will have an additional 7 billion cruzeiros for investment in the second half of this year. That information was given yesterday by the president of the state holding company, Gen Jose A. de Alencastro e Silva during his talk at the Brazilian Association of Sales Managers (ADVB).

Those 7 billion will complete the 55 billion cruzeiros that TLEBRAS plans to spend this year, in addition to the sums included in the budget approved by the Secretariat for the Supervision of State Enterprises (SEST), in the amount of 370 billion cruzeiros. The 55 billion cruzeiros will also be applied to amortization and interest on the debt--only 600 million cruzeiros pertain to amortization of the foreign debt this year--and the defrayal of expenses.

"The important thing," commented Alencastro e Silva, "is that TELEBRAS has those funds. They are generated by the concessionaires, counting on the rate readjustments that are to go into effect this year, and they exceed the budget forecast. Therefore, we are not depending on a disbursement from the federal government for that purpose."

Satellite

Alencastro e Silva explained also that purchase of the domestic xatellite for the telecommunications system will not require any disbursement by the government. "The transaction will be made on an exchange basis," he remarked. "The country that supplies the satellite will have to assume a commitment to purchase the same value in Brazilian goods."

Commenting on the funds of the National Telecommunications Fund (FNT), which should amount to 60 billion cruzeiros in fiscal year 1982, the president of TELEBRAS affirmed that the funds are being applied in the sector. "There is no diversion of funds to other sectors," he emphasized. "This year, for example, we have 76.3 percent of the FNT for application in the TELEBRAS area.

Alencastro reported also that Communications Minister Haroldo de Mattos' opinion, regarding replacement of space "computer program-controlled exchanges" (CPA's) with time system CPA's in the next installations ordered by the government, will be revealed next week. "Contracting of space system CPA's is not prohibited," declared Alencastro e Silva. "They will still find a market in expansion of the systems that have already been installed. It is simply that the trend throughout the world is for time systems and we have to foresee the progress of data-processing in the data-transmission sector. After all, it is already approaching today."

Budget

TELEBRAS will have to submit its budget for analysis by the SEST by 31 August of this year. "Last week we obtained the rules for 1982 and now we are going to prepare the budget within those rules," said the president of TELEBRAS. "We still do not have any idea of the figures but we already know that we will continue to have the possibility of expanding our expenditures if we get larger revenues as we did this year."

8711
CSO: 5500/2259

BRIEFS

NEW MICROWAVE TRUNK LINKS--The high-capacity microwave trunk links, Vitoria-Salvador and Salvador-Fortaleza, will be inaugurated tomorrow by the Brazilian Telephone Company (EMBRATEL) at a ceremony in the Bahia Administrative Center which will be attended by Communications Minister Haroldo Correa de Mattos, EMBRATEL president Helvecio Gilson, Governor Antonio Carlos de Magalhaes and various officials and special guests. Simultaneous ceremonies will be held at the other two cities (Vitoria and Fortaleza). The two microwave trunk links will serve as alternative routes for the systems that already exist between Vitoria and Salvador, and Salvador and Fortaleza, establishing greater traffic capacity for telephone, telegraph, facsimile, television and data services. [Text] [Sao Paulo O ESTADO DE SAO PAULO in Portuguese 25 Jun 81 p 20] 8711

CSO: 5500/2259

BRIEFS

IRAQI-JORDANIAN MICROWAVE--Baghdad, 24 July (PETRA)--An unidentified Italian firm has won a contract from the Iraqi Ministry of Communications to implement the western Dijlah-Baghdad-Amman microwave project at a cost of $40 million. The project, to be completed in 31 months, should make available 1,260 microwave telephone channels between Amman and Baghdad, in addition to two functioning broadcast channels and one spare. The project entails the installation of microwave equipment and the construction of 17 stations in Iraq extending over 500 kilometres and eight more in Jordanian territory, over 300 kilometres. The project, when completed, will ensure better radio and television programme exchanges between Jordan and Iraq. [Text] [JN251013 Amman JORDAN TIMES in English 25 Jul 81 p 2 JN]

CSO: 3500/2273

MICROWAVE LINK WITH SAUDI ARABIA

Doha GULF TIDES in English 16 Jun 81 p 3

[Text]

Doha: A QR50m repeater tower, now being erected at the Qatar-Saudi border of Sauda Nathil, may speed up regional integration in communications.

Saudi Arabia is already microwave-linked with Sudan — the longest "hop" in the communications world — and the UAE and Kuwait are likely to join the network soon. Bahrain is already linked with the Saudi communications by coaxial cable.

The Qatari microwave network which is likely to be completed in about 10 months will pave the way for a regional communications grid, says Mr Faud Abbas, head of engineering at Qatar's telecommunications department.

Coming as it does in the wake of the establishment of the Gulf Cooperation Council, it augurs well for a regional integration, says Mr Abbas, a US-trained electronics engineer.

Mr Abbas said that a Qatar-Saudi initiative to strengthen communications through the microwave project has already been taken. A US firm has been retained to erect a repeater tower on the Qatari side of the border at Amasiyah. The Saudi tower survey is already complete.

The Qatar repeater tower will receive messages from the main tower at Mukinis earth station and relay them to the Saudi tower.

The system will open up TV and stereo channels and facilitate all kinds of communications between Qatar and Saudi Arabia.

"And when Kuwait and the UAE networks join the grid it will be possible to exchange communications between all Gulf states," Mr Abbas added.

Mr Abbas said earth station is another way to achieve regional integration in communications. But it is highly expensive and perhaps Gulf countries alone could have it.

"By microwave we can expand communications facilities to other Arab states via Saudi Arabia which is linked to Sudan and Sudan to Egypt and Egypt to Libya, Tunisia, Morocco and other Arab states."

CSO: 5500/4723

PAN-AFRICAN NEWS AGENCY TO BEGIN OPERATIONS IN 1982

AB251342 Paris AFP in French 1253 GMT 25 Jul 81

[Text] Dakar, 25 Jul (AFP)--The Pan-African News Agency [PANA], will begin operating in 1982, Cheick Ousmane Diallo, its director general, stated at the end of the PANA inter-governmental council meeting in Dakar.

Mr Diallo, however, did not state the exact date the operations will begin, but this should take place after an extraordinary session of the inter-governmental council (January 1982) and a meeting of the Council of African Information ministers, both scheduled to take place in Dakar.

The PANA director general said that the intergovernmental council has adopted the agency's budget, which according to him, provides for a general fund (as a repository for contribution of member states) and a rolling fund which will ensure the functioning of the agency and avoid any financial problems.

Mr Diallo also added that the council heard the report of the technical committee on PANA's proposed telecommunications network. Communication problems had been one of the elements holding back the establishment of PANA since 1963, he said. According to him, the council retained its principle that PANA should use an African line to distribute its information in Africa when operations begin.

The director general called on member countries to pay their contributions because information forms an integral part of the sovereignty of member countries. In his report on activities Mr Diallo announced that only 21 out of the 50 members had sent their contributions by 15 July.

Mr Lucio Lara (Angola) was reelected as the PANA intergovernmental council's chairman.

CSO: 5500/2273

ZAMBIA, BOTSWANA, ZIMBABWE MICROWAVE NETWORK

Lusaka TIMES OF ZAMBIA in English 11 Jul 81 p 5

[Text]

FEASIBILITY studies on the setting up of a multi-million Kwacha inter-regional microwave network to link Zambia, Botswana and Zimbabwe will be completed soon, Norwegian consul resident in Zambia Mr Khristian Pettersen said in Lusaka yesterday.

Mr Pettersen said most of the studies on the setting up of the three-nation microwave network had been completed except for the technical aspects of the project.

The microwave network which would be funded through a grant by the Norwegian and Swedish international development agencies (NORAD) and (SIDA) will introduce improved and direct telephone and telex links between the three countries and make it possible for the states to exchange television films.

Toured

A four-man team of engineers from two Scandinavian firms, Thera of Norway and Ericsson of Sweden, who will undertake the project, toured the three countries to negotiate, plan and coordinate technical aspects of the microwave link.

The planned telephone links will be connected to the existing regional network in the three countries at Livingstone in Zambia, Bulawayo in Zimbabwe and Francistown in Botswana.

The cross-the-border system will be able to carry 960 telephone channels and 18 television stations with possibilities for separate rural networks.

The introduction of the inter-regional microwave is a result of the Southern African Development Cooperation Conference attended by the three countries ministers of communications in Maputo, in November last year. — Zana.

CSO: 5500/5049

BRIEFS

ZIANA-AIM AGREEMENT--The national news agencies of Zimbabwe and Mozambique signed an agreement in Salisbury today covering the exchange of news assistance to all correspondents and training. The chairman of the Mass Media Trust, Dr Sadza, signed on behalf of the Zimbabwe Inter-African News Agency (ZIANA) and Comrade (Cadasso), the director of the Mozambique News Agency, AIM, represented his organization. The agreement stipulates that both agencies should telex news to each other with the cost to be the responsibility of the sender. This was to be done without altering the editorial content of the news. The agencies are also required to give accreditation to correspondents from the two states and also to undertake training of their staff in any of the two countries. The agreement is valid for one year and it will be reviewed regularly. [Text] [CA250240 Salisbury Domestic Service in English 1600 GMT 23 Jul 81 CA]

CSO: 5500/2273

TELEX NETWORK TO BE EXTENDED TO ALL PROVINCES

Luanda JORNAL DE ANGOLA in Portuguese 12 Jul 81 p 1

[Text] The national telex communications network will be extended to all the nation's provinces by the end of 1982 at the latest, Carlos Cruz, director of the National Telecommunications Company, told the ANGOP press agency.

This important benefit will be made possible by the microwave system and the "trans-horizonte," two transmission networks that are already being installed in Angolan territory and whose construction is to be completed by that time.

According to an interview with ANGOP, 513 telex machines are now operating in our country, within the provinces of Luanda, Benguela, Cabinda and Huambo. Three telex central exchanges assure communications with all regional capitals.

As regards prospects for the sector, Carlos Cruz pointed out that 10 of the 18 Angolan provinces will probably be included in the national telex network by the end of this year. This means, among other things, that the media can extend their news-gathering services to three more provinces (Uigi, Malanje and Kwanza-Norte) in a first phase.

Expansion of the national telex network will imply, meanwhile, acquisition by EPTEL [State Telecommunications Company] of 300 telex teleprinters and modernization of some other material that is now almost obsolete.

The importance of telecommunications in our country must be stressed, since it interconnects the various sectors of our economy and is also called upon to support the mass media, making possible collection of news material, transmission of radio programs and even, in some cases, television broadcasts.

8834
CSO: 5500/5050

BRIEFS

NEW TELECOMMUNICATIONS SYSTEM--(ANGOP)--A new telecommunications system called Trans-Horizonte will be installed this year in the city of Lubango. With that in mind, a team of technicians from the Portuguese firm "Teixeira Duarte" is now there and will soon begin constructing the foundations for the system's pylons. The new system, which will replace the inoperative micro-wave system, will not only improve conditions for telephoning from Lubango but will also permit making telex connections and even make an important contribution to television, the broadcasting of which is expected to begin next year. Trans-Horizonte, which will be installed by a Japanese firm by October of this year, has the chief advantage of not requiring relay stations, although it provides fewer channels. [Text] [Luanda JORNAL DE ANGOLA in Portuguese 11 Jul 81 p 1] 8834

MALANJE TELEPHONE IMPROVEMENT--It is at present difficult to make a telephone connection to outside the urban centers. There are various obstacles, ranging from some operators' lack of understanding to material difficulties, which are not few. In the particular case of Malanje, the problem of urban and interurban calls reached the point where all telephones would become inoperative if, for example, the Cacolo electric motor ran out of fuel. But there is hope that this situation will change, because technical measures are being taken to make the Malanje telephone station automatic. It does not yet meet the conditions for being automatic both because its equipment is insufficient and because it is worn out. To replace it, a new exchange is being built that will probably be ready in October. With the new system the province will also have the benefit of a television channel, very useful for broadcasting news and sports. [Excerpts] [Luanda JORNAL DE ANGOLA in Portuguese 14 Jul 81 p 2] 8834

CSO: 5500/5050

BRIEFS

NOVOSTI PRESS OFFICE TO OPEN--The influential Novosti press agency of the Soviet Union is to set up a bureau in Sierra Leone. Disclosing this for the first time yesterday, the Soviet Ambassador to Sierra Leone, Mr Alexander Vorozhov told the Minister of Information and Broadcasting that he was anxiously awaiting the conclusion of the protocols for the opening of the Novosti press agency in this country. The envoy who was paying a courtesy call on Mr. J. A. Laverse expressed gratitude for the way the news media in Sierra Leone has been publishing news items that concerned his Embassy. Ambassador Vorozhov also expressed delight that the installation of equipment for the improvement of "We Yone" has now been completed. He said that over the years, the Soviet Union has stepped up the publishing of news materials about activities in Sierra Leone. As a result, he added, the Soviet public now know a lot about this country. [Text] [Freetown DAILY MAIL in English 15 Jul 81 p 1]

CSO: 5500/5051

NEWS AGENCY PACT SIGNED WITH MAPUTO

Salisbury THE HERALD in English 24 Jul 81 p 6

[Text] The two national news agencies of Zimbabwe and Mozambique signed an agreement in Salisbury yesterday covering the exchange of news, assistance to correspondents, and training.

Dr Davidson Sadza, the chairman of the Mass Media Trust, signed for Ziana (Zimbabwe Inter-African News Agency), while Mr Carlos Cardoso, the director of AIM (Mozambique Information Agency), signed for his organisation.

In terms of the agreement, both agencies are obliged to telex each other daily, with news relating to each others' countries, as well as items of international importance, with the cost to be carried by the sender.

The agreement specifies this is to be done without altering the editorial content of the news.

The agencies are also to help correspondents on special assignments in each other's countries, especially in gaining accreditation and technical facilities with the relevant authorities.

Also in the agreement is a clause stating that both agencies will exchange information on the training of their personnel, and each party also undertakes to train the other's staff during working visits.

The expenses of this will be borne by the host party.

Progress in co-operation will be reviewed regularly.

The agreement is valid for a year, but will automatically be renewed for another year if neither party expresses the wish to terminate the agreement.

Also provided for at a later stage is the exchange of photographic material.

CSO: 5500/5052

WORLD'S LARGEST GROUND STATION COMPLETED

Munich SUEDDEUTSCHE ZEITUNG in German 27/28 Jun 81 p 34

[Article by HEN: "Increased Capacity for Satellite Traffic"]

> [Text] Since Friday the German Bundespost has been operating the largest earth station of the world in Raisting in Upper Bavaria. Federal postal minister Kurt Gscheidle charged the two new antenna installations with increasing the reception and transmission capacities of the Bundespost in international satellite commerce by more than 50 percent. Utilizing the two parabolic reflectors with a diameter of about 32 meters, the Bundespost can handle additional telecommunications through 900 new telephones and television channels.

Gscheidle explained the need to build the two new antenna installations in his inaugural address. In spite of improved technology the three antennas used up to now were no longer sufficient to cover satellite telecommunication needs. Therefore, an antenna had to be built for a third Atlantic satellite and an additional one to improve transmission possibilities across the Indian Ocean, particularly to Asian countries and to Australia. Thus the capacity of the earth station Raisting is extended through existing connections with 47 countries from 1,650 channels, designed primarily for telephone, telegraph and data traffic, to 2,550 channels. The new antennas have been built to conform in form, material and construction with the existing ones so that a uniform total impression would be achieved by the earth station. Technological advances are evident in the internal areas of the new buildings. Whereas five floors were still necessary for the radio technical devices of antenna unit II, the new antennas require only two floors.

The federal postal minister recalled in Raisting the establishment of the international satellite telecommunications organization Intelsat 17 years ago by 11 telecommunications administrations. The German Bundespost was there from the beginning. The first satellite used for commercial telecommunications, "Early Bird," with a total capacity of 240 talk channels provided the German Bundespost with 24

additional talk possibilities for North America. The most recent representative of the satellite family, Intelsat V, on the other hand, would make the transmission of 12,000 simultaneous telephone conversations possible. At the same time two color television programs could also be transmitted. Without these satellites a world-wide direct dialing service would not be conceivable, such as the one which the German Bundespost provides to 60 non-European countries. Compared internationally, the Bundespost occupies a leading position because German telephone customers can dial directly through 95 percent of all connections in non-European areas.

Commercial satellite news traffic between Europe and America began almost precisely 16 years ago, on 28 June 1965, with the satellite Intelsat I. The earth station Raisting at that time consisted of a single antenna unit which had in 1964 already established contact with the satellites Relay and Telstar which were then orbiting. As a response to the increasing need for intercontinental news connections an additional antenna was built in 1969 and another in 1972 just in time for the Munich Olympic Games. The two new units were built in a completion time of 1 1/2 years. Their cost amounts to about DM 55 million.

9485
CSO: 5500/2256

BRIEFS

LONG-TERM RADIO PLAN--Radio France is aiming to have about 100 local radio stations in the long term, according to a decision taken yesterday by its Administrative Council. The model for the stations will be Radio Mayenne, a station which covers a whole department. For the moment three local radios will be set up before the end of the year and about 30 others will be studied. [LD241343 Paris Domestic Service in French 0600 GMT 24 Jul 81]

CSO: 5500/2273

BOARD SEEKS SELF-REGULATION BY LOCAL RADIO STATIONS

Stockholm SVENSKA DAGBLADET in Swedish 1 Jul 81 p 6

[Article by Margit Silberstein]

[Text] This fall the 310 local radio associations will meet to discuss voluntary advertising rules. It is likely that there will be no rules prohibiting attacks on immigrants. Immigrant baiting is something that is very hard to get at. But local radio advertising, on the other hand, is easier to stop.

This past weekend Radio 88 in Stockholm achieved an advertising coup by broadcasting commercials for several hours. According to the regulations in the Local Radio Law, the Local Radio Committee now has grounds for revoking the association's broadcasting license.

On the same weekend, Open Forum broadcast a program filled with streaks of agitation against immigrants. But the regulations in the Local Radio Law provide no legal authority for putting a stop to such agitation.

Open Forum is an extremely loose association that has not had its broadcasting license for long. But during the time that it has been active in local radio, that association has managed to say a thing or two about immigrants in Sweden. A program that was broadcast at the end of May was reported to the attorney general (JK) as constituting agitation against Turks and Finns, among others.

Against all Rules

Shall Open Forum be allowed to continue its agitation against immigrants over the radio? The answer is yes--at least for quite some time to come.

It seems unlikely that this fall's meeting by the local radio associations will soon result in a ban on Open Forum and similar associations. The question is whether the 310 different associations will be able to agree on any rules at all, or whether most of them consider things fine the way they are now, with almost unlimited freedom.

Olle Palmborg, secretary of the Local Radio Committee, admits that several associations have already said that they oppose rules.

And even if they could agree on voluntary rules, that would not automatically mean that they could use them to ban agitation against immigrants.

Olle Palmborg says: "That depends on how the rules are worded. I cannot say that we would have rules refusing broadcast time to Open Forum and other similar associations. I can imagine general rules requiring objectivity and broadcasting rules of a technical nature."

Legislative Changes Later

Palmborg points out: "What we can do today in the case of Open Forum is not allow them extra broadcast time beyond the 30 minutes per week that they already have. Besides, a change in the law is in the works."

What he is alluding to is the proposal by the government's commission on discrimination to make it a punishable offense to express oneself disparagingly in print or speech on the subject of immigrants in general. Today it is not an offense to agitate against immigrants in general, but it is forbidden to attack specific groups, such as Yugoslavs, Greeks, and so on. But it will be at least a year before the new law goes into effect.

JK Can Start Legal Proceedings

One way to stop Open Forum would be for the JK to decide to start legal proceedings against it for violation of the Freedom of Speech and Press Act. According to the complaint received by the JK against Open Forum, the agitation in the program in question singled out specific groups of immigrants.

Since local radio has no equivalent to the Radio Board, it is the JK who investigates local radio programs when questions involving freedom of the press are at issue. The JK has received 10 complaints since the start of 1979. None has resulted in prosecution.

Radio Board Wants Control

Introduce the same rules for local radio as for the entire radio combine as far as racist remarks, the violation of individual integrity, and advertising are concerned. So says the Radio Board, which is recommending itself as the authority that should insure compliance with programming rules.

The recommendation is part of a statement of opinion in response to the Local Radio Committee's report entitled "Local Radio."

The Radio Board says that voluntary rules are not enough when it comes to dealing with statements that violate an individual's integrity and agitate against immigrants.

As far as the ban on advertising is concerned, the ban should also apply to advertising that is broadcast without payment, says the Radio Board, which wants stiffer wording than the Local Radio Committee.

Lars Bergman, director of the Radio Board, says: "Otherwise, local radio may become an advertising medium."

The Radio Board therefore wants to supervise even local radio programming and wants an association caught by the board to have its broadcasting license revoked.

Olle Palmborg, secretary of the Local Radio Committee, comments:

"The idea, of course, was that local radio would be analogous to the newspapers. If it is subject to the same rules as the radio combine, there is a danger that local radio will come to have an official position. We want to be among the grassroots."

11798
CSO: 5500/2258

NEW COMPUTER-PHONE-BUSINESS INFORMATION SYSTEM MARKETED

Stockholm TELE in Swedish No 2, 1981 pp 1-17

[Article by Kurt Paulsson, head of the Private Branch Exchange Office, Technical Department, National Telecommunications Administration head office]

> [Excerpts] Thanks to a newly developed computer-aided interception system, the interception service at large private branch exchanges [PBX's] can be considerably improved. The interception system opens up entirely new possibilities for such a service, not least because it allows an individual to initiate the interception process without operator assistance. The system solution, which was produced by the National Telecommunications Administration, has been field tested since the fall of 1979 using the PBX at Folksam's head office in Stockholm. The National Telecommunications Administration expects the system to open up new ways of solving traditional "coordination problems" in large private branch exchanges. It will be marketed under the name SESAM (SERvice genom SAMverkan [service through cooperation]). During 1981 the total system solution will be marketed by the National Telecommunications Administration as an entirely new service for A-344 and A-345 exchanges. In a later stage, A-333 and ASD-551 exchanges may also become suitable for connection with the system.

To a large extent, today's telephone answering service in large firms is tied to the operator. Organization of the answering service has long been a growing problem. In addition to putting through calls, for example, PBX operators generally spend considerable time answering the telephone, handling directory information, and so on. In the process, they must be able to store and retrieve temporary as well as permanent information concerning primarily the individuals assigned to each station connected to the PBX.

The fact that exchange subscribers realize they have telephone problems has been noted in several contexts. The chief symptom of those problems is the difficulty operators have in providing the caller with entirely satisfactory information. For example, it may be difficult to give the caller specific answers, or there may be difficulty in referring him to (connecting him with) an alternative extension.

The problems arise in part because interaction between the employee and the telephone operator does not always function well. In addition, the tools currently available

to the operator for referral or directory assistance require so much effort that the operator cannot maintain a desirable level of service. Manual directories and "loose slips of paper" not only make the work time consuming but also result in some degree of uncertainty as to whether the information is current, complete, and so on. More effective tools for the operators are being increasingly sought in order to improve the telephone service.

Greater consideration for the work environment is also focusing interest on more modern tools.

Labor costs are important when the possibilities for maintaining or improving service are being considered. Instead of increasing the number of operators, rationalizing their work is a natural alternative to be looked into.

More automatic tools for the operators are an important issue. This has been shown by discussions with customers concerning their answering service. Information pointing in the same direction has come from field salesmen in several of the telephone company's regional divisions.

The tools ordinarily in use today for information storage are manual directories of various kinds. They generally include a listing of each employee's name, extension number, and department and a reverse directory for finding names, departments, and so on based on extension numbers. Supplemental directories are also produced, including such things as organization charts, occupational charts, and so on, to enable the operator to find the right extension number when, for example, a caller is not sure who it is that he wants to talk to.

In addition to that permanent information, the operators need to keep notes so that they keep track of the more or less temporary information concerning absences, the possibility of reaching the person elsewhere during his absence, when he is expected to return, whether someone else can take the call, and so on. This so-called primary information is required to a varying extent in different exchanges. Its purpose is to allow the operator to provide the caller with meaningful information.

In addition, operators often need to record information or messages from the caller--that is, information to be relayed to the person called when he is heard from.

Background

When the delivery of A-344 exchanges began in 1961, a special tool had been developed to facilitate the interception function in those exchanges. When needed, a plug panel is provided with an intercept marker. When a call comes in for a marked number, it is redirected to an interception office, where the caller can get information concerning the reason for the interception and so on. The system was later modernized so that the operator in the interception office could see from an indicator panel which number was being called and why the call was intercepted (one of 10 possible standard reasons).

In the mid-1970's, minicomputers became more generally available. Some exchange subscribers then began to use them as auxiliary equipment for supplementing such things as manual directories and plug panel equipment as well as for recording reasons for absences and so on. About 15 A-344 customers have so far provided their operators

with such computer assistance. In those cases, however, the systems are completely independent of the exchange equipment--they have been bought and maintained by the exchange subscribers themselves.

In that context, the National Telecommunications Administration saw the possibility of further increasing the data-handling efficiency of PBX operators by creating direct interaction between the exchange's automatic operation on the one hand and the supporting computers with their related terminals and display equipment on the other.

That was the background when, in mid-1977, a test program was sketched out for providing computer assistance for PBX operators in firms. The program would mean making the computer function an integral part of the exchange function. The test was scheduled to take place in two phases. The first phase involved tests with a rather simple interface unit that was already available and could be connected to exchanges where the interception office had been equipped with signal boards providing a visual display of the reason for interception and the extension number. The second phase covered tests with a more sophisticated interface unit allowing connections with exchanges of standard design and, among other things, eliminating the need for the special plug panel equipment. The unit was to be designed as a minicomputer-based scanning unit with simple connections for attachment to both the exchange and the computer equipment.

The first phase of the test began in December 1977 using the A-344 exchange at the social insurance office in Stockholm, one of the few exchanges at the time that was equipped with an interception service using signal boards. The main purpose of the test was to determine how computer assistance in the interception service should be designed so as to best serve the operators in their work.

The computer connected to the interface unit had been produced especially for interception purposes, and it was made available to the National Telecommunications Administration for its test program.

That first phase of the test program was concluded with good results in the spring of 1978. It was then time to plan for the second phase of testing, in which the computer and exchange functions were to be more completely integrated. Among other things, this would make it possible to eliminate the plug panel. For the National Telecommunications Administration, it meant beginning the development of a new minicomputer-based scanning unit to replace the simpler interface unit used in phase 1. In addition, the signal standards that would apply to the interface between computer and exchange were decided on, and the computer supplier for the test was selected.

Test phase 2 began during the fall of 1979. Mainly for practical reasons, the test activity was then moved to Folksam's exchange at Skanstull in Stockholm. This part of the test was carried out through productive cooperation between the development and marketing departments of the head office of the National Telecommunications Administration, the Stockholm telecommunications district, and Folksam. Quite a number of very interesting functions were added to the intercept system during that phase. SESAM was beginning to take shape.

The chief improvements in the functions of the A-344 exchange as a result of the new equipment are the following. Where appropriate, they also apply to the A-345 exchange.

1. The interception plug panel is eliminated.

2. The "interception board"--that is, operator stations assigned exclusively to interception duties--is eliminated.

3. The manual lists serving primarily as directories are eliminated, as is all the note taking th/ . was previously required for maintaining an effective interception and answering service.

4. The interception service is distributed among all the operator stations.

5. The operator stations are provided with computer terminals for all data handling as far as directory and interception information is concerned.

6. Local answering stations, reception desks, and so on can be provided with computer terminals.

7. Each individual can initiate his or her own "interception service."

8. Calls can be transferred to other stations.

9. Computerized directory functions are added.

10. With "operator calls" and transferred direct inward dialing [DID] calls, the operator obtains information as to the type of traffic and the telephone number and name of the extension in question.

11. The ergonomics of the operator station are improved.

December 1979 saw the establishment of requirements for the "external" computer and related terminals that could be attached as a component of the interception system. The requirements were based on experience gained during the test activity carried on during the fall of 1979 and discussions held with especially large PBX customers.

In January 1980 the management of the National Telecommunications Administration decided that steps should be taken to insure that computer-aided interception service of the type tested at Folksam would be available for delivery to current PBX customers during 1981. At the end of February, it called for bids for the production of those parts of the interception system that had not been developed within the National Telecommunications Administration itself--that is, the computer and its related terminals. Following an evaluation of the bids, contracts were signed with two firms, the RTC [expansion unknown] and FRIKAB [expansion unknown]. In the first stage, according to the contract, FRIKAB is to design the computer equipment and then produce and deliver it to the National Telecommunications Administration, with mass deliveries to begin during 1981.

In this article, the system design and functions of SESAM, the computer-aided interception service, will be described in greater detail. This will be followed by a discussion of how an interception service is organized within a firm. We will then describe briefly the interception computer's technical design. Lastly, there is a section comprising a few thoughts on the possible further development of SESAM's functional content.

When SESAM is added to currently existing types of exchanges, there will be minor differences in functions and functional content. Unless otherwise indicated, therefore, the descriptions below apply to the A-344 exchange.

System Design

As can be seen from figure 1 [not included], the components of SESAM are the interception processor, the interception computer, and terminals connected to the interception computer. The function of the components will become more apparent from the brief descriptions below.

Interception Processor

The interception processor is that part of the system which receives and stores information concerning the extensions being intercepted. When calls to those numbers come in, the processor redirects them to the associated answering station for the operator or local answering station function and at the same time issues an instruction for the interception information to appear as a display on the display unit or as a printout on the printer at the answering station in question. The interception processor also handles the call transfer function.

The interception processor therefore reads the exchange's digital receiver unit and registers the digital combinations subject to the interception and transfer function. Those combinations are chiefly the extension number itself (in the case of an interception or call transfer generated by the individual assigned to that number), the alternate extension number (in the case of calls put through to the intercepted or transferred extension number), and the number combination dialed on the telephone set itself when the individual is setting up or canceling the interception or call transfer.

The interception processor also accepts and registers information from the interception computer, mainly in connection with the setting up or canceling of interception and call transfers from the terminal.

The records thus made are all temporary in nature. But permanent information can also be stored in the interception processor. Such information would be chiefly the number of the operator or local answering station, the numbers of associated computer terminals, and information as to which extensions are tied to a particular answering station. Data concerning the design of the particular exchange are also part of the permanent information.

In conventional electromechanical exchanges, the interception processor normally consists of a minicomputer-based unit, as in the case of the A-344 exchange (see figure 2 [not included]), while in stored-program-controlled exchanges, it would in most cases probably be part of the program itself, as in the case of the A-345 exchange.

Interception Computer

The interception computer is the part of the system which stores and handles directory and interception data on command from the interception processor and the terminals. Directory data consist normally of the information included in the firm's internal telephone directory--each employee's name, telephone number, department, and

so on. The interception data consist partly of "primary" information and partly of "secondary" information. Primary information is that applying to the specific interception, the normal reason for the interception, and the time of return, supplemented possibly by other information that may be useful for rapid and accurate service at the answering station. Secondary information is the information collected at the answering station in the form of messages from the caller while the interception is in effect. In other words, this would be messages to be relayed to the person called when he or she returns and the interception is normally canceled (the normal situation).

A section below [not included] provides some technical data on the interception computer and its design and shows a picture of the prototype installed at Folksam's exchange.

Terminal

The terminal is that part of the system which is placed at the answering stations. Together with the operator and/or extension set, it constitutes an integral part of the answering function. A picture of it appears in figure 3a [not included]. It consists of a keyboard, a display unit, and a printer. Its functions are described briefly below.

Keyboard

The keyboard character arrangement is shown in figure 3b [not included]. The keys are either functional or alphanumeric.

Display Unit

The display unit displays data in the form of alphanumeric text when the keyboard is in use and when calls to the intercepted extension number are being answered.

The terminal at the operator station also displays data on its screen when operator calls are being answered and in the case of transferred DID calls. The data displayed can include, among other things, information concerning the kind of traffic and the extension number or telephone number and name of the party called.

Printer

The printer's main functions are:

1. To print out secondary messages when the interception status is canceled.

2. To print out what is on the display unit when instructed to copy.

System Functions

The functions in SESAM can be assigned to two separate blocks: the directory block and the interception block. Both blocks, the chief purpose of which is to serve the terminals at the answering stations, work completely independently. But information is exchanged between the blocks whenever data are displayed on the display unit. When calls to the answering station are being answered, for example, the display of

interception data is always accompanied by a display of associated directory data. And when directory data are displayed in connection with a search and direct retrieval at the terminal, information is always provided concerning any possible interception data. A brief description of both functional blocks follows [not included].

Traffic Flow

In the case of electromechanical PBX's (the A-344 and others), the introduction of computer-aided interception service means that in addition to computer support at the answering stations, those exchanges will assume the function of call transfers. This is an important function from the standpoint of service, and until now it has been available only in the National Telecommunications Administration's electronic PBX's.

This function, which means that a call to one's own telephone set can be redirected to another specified extension set, makes it possible, as an example, for the subscriber himself to make temporary connections between sets within the firm without assistance from the National Telecommunications Administration. Call transfers can be set up from an individual telephone set as well as from terminals.

The logical connection between the call transfer function and the interception function will operate somewhat differently in different types of exchanges when computer-aided interception is added to existing exchange systems. The main reason is that modifications to those exchanges must be limited in scope.

The operation of the call transfer function and of the mutual relationship between call transfers and interception in the A-344 exchange is shown in figure 9 [not included], which also illustrates in greater detail the kinds of traffic that can occur. In all cases where the connection is passed on to the answering station, detailed information about the extension or extensions involved is displayed on the display unit in the form of call transfer information, interception information, and so on. As the diagrams show, transfer calls can always be switched to the interception operator. In the case of the A-345 exchange, an instruction to intercept always takes precedence over any other function previously initiated in the interception block (such as a call transfer or a further connection).

Thoughts on Further Development of SESAM

As a result of the ideas and thoughts produced during the process of developing computer-aided interception service, it is possible that the SESAM system solution as now adopted should be regarded more as a basic function in a systems concept than as a final solution to the problems of answering services. Contributing to this has been the function of "self-initiated interception," as well as the natural connection existing between the interception function and the functions in other independent systems that record information of an interception nature.

Below is a brief list of some of the ideas which came up and which are interesting enough to be considered suitable areas for further development.

1. Information transfer between an "external system" and the "interception computer."

2. Employment opportunities as operators for those with visual impairments.

3. Transferring a call from the called extension number to a personal paging system.

4. Transferring a call from the called extension number to a centrally located telephone answering machine.

11798
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TELEPHONE DISTRIBUTION FIGURES CITED

Istanbul MILLI GAZETE in Turkish 12 Jun 81 pp 7, 8

[Text] Izmir (TURKISH NEWS AGENCY) -- There is, on average, one telephone for each 39 people in Turkey, while one in every 27 is waiting to get a telephone, it was announced.

According to PTT [Post, Telephone and Telegraph Administration] data including 1981 estimates, telephone subscribers reached 1.155 million last year and the number waiting to get telephones was 1.65 million.

Thus those who want telephones far outnumb r those who have them.

In this case, while an average of one in every 39 persons in Turkey has the advantage of a telephone, one in every 27 is waiting impatiently to own one.

According to the PTT data, only 170,000 of the 1.65 million people on the waiting list will get new telephones in 1981.

According to the same data, telephone switchboard capacity has been increased by 163,350 lines, raising the switchboard capacity to 1.355 million.

Fully automated intercity connections now link 26 new centers, including 5 provincial capitals, and a total of 79 new links were established, 54 of which are provinces, and fully automated telephone links have been installed, 54 of which are provinces [as published].

In international telephone links, the number of semiautomated links has risen to 25 nations, with 6 of these being fully automated, and telecommunications links have been installed in 7,800 villages.

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12 Aug. 1981